



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# GRP78 (Bip) Protein

Human Recombinant GRP78 (Bip) Full Length Protein  
Catalog No. SPR-119



Discovery through partnership | Excellence through quality

## Overview

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### Product Name

GRP78 (Bip) Protein

### Description

Human Recombinant GRP78 (Bip) Full Length Protein

### Applications

WB, SDS-PAGE, ATPase Activity Assay, Functional Assay, ELISA

### Concentration

1 mg/ml

### Conjugates

No tag

### Nature

Recombinant

### Species

Human

### Expression System

E. coli

### Protein Length

Full Length

## Properties

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### Storage Buffer

20mM Tris/HCl pH7.5, 0.45M NaCl, 10% glycerol, 0.5mM DTT

### Storage Temperature

-20°C

### Shipping Temperature

Blue Ice or 4°C

### Purification

Affinity Purified

### Specificity

~78 kDa

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## Cite This Product

Human Recombinant GRP78 (Bip) Protein (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SPR-119)

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## Certificate Of Analysis

This product has been certified >90% pure using SDS-PAGE analysis and gamma globulin as the protein concentration standard.

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## Biological Description

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### Alternative Names

BIP Protein, Grp78 Protein, HSPA5 Protein, MIF2 Protein, immunoglobulin heavy chain binding Protein

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### Research Areas

Cancer, Heat Shock, Cell Signaling, Chaperones, Organelle Markers, Trafficking

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### Cellular Localization

Endoplasmic reticulum lumen, Melanosome

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### Accession Number

NM\_005347

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### Gene ID

3309

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### Swiss Prot

P11021

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### Scientific Background

GRP78 is a ubiquitously expressed, 78-kDa glucose-regulated protein, and is commonly referred to as an immunoglobulin chain binding protein (BiP). The BiP proteins are categorized as stress response proteins because they play an important role in the proper folding and assembly of nascent protein and in the scavenging of misfolded proteins in the endoplasmic reticulum lumen. Translation of BiP is directed by an internal ribosomal entry site (IRES) in the 5' non-translated region of the BiP mRNA. BiP IRES activity increases when cells are heat stressed (1). GRP78 is also critical for maintenance of cell homeostasis and the prevention of apoptosis (2). Luo et al. have provided findings that suggest GRP78 is essential for embryonic cell growth and pluripotent cell survival (3). In terms of diseases, GRP78 has been shown to be a reliable biomarker of hypoglycemia (Barnes), to serve a neuroprotective function in neurons exposed to glutamate and oxidative stress (4), and its protein levels are reduced in the brains of Alzheimer's patients (5). Also, the induction of the GRP78 protein that results in severe glucose and oxygen deprivation could possible lead to drug resistance to anti-tumor drugs (6, 7).

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### References

1. Cho S., et al (2007) Mol Cell Biol. 27(1): 368-83.
  2. Yang Y., et al. (1998) J Biol Chem. 273: 25552-25555.
  3. Luo S., et al (2006) 26(15): 5688-97.
  4. Yu Z., et al. (1999) Exp Neurol. 15: 302-314.
  5. Koomagi R., et al. (1999) Anticancer Res. 19: 4333-4336.
  6. Laquerre S., et al. (1998) J. Virology. 72: 4940-4949.
  7. Dong D., et al. (2005) Cancer Res. 65(13): 5785-91.
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## Product Images

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Currently there are no images for this product

## Product Citations (4)

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## ATPase Activity Assay

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**Bcl-2 associated athanogene 5 (Bag5) is overexpressed in prostate cancer and inhibits ER-stress induced apoptosis.**

Bruchmann, A. et al. (2013) BMC Cancer. 13:96.

**PubMed ID:** 23448667    **Applications:** ATPase activity assay

**A Peptidic Unconjugated GRP78/BiP Ligand Modulates the Unfolded Protein Response and Induces Prostate Cancer Cell Death.**

Maddalo, D. et al. (2012) PLoS ONE. 7(10): e45690.

**PubMed ID:** 23049684    **Applications:** ATPase activity assay

## Other Citations

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**HKH40A downregulates GRP78/BiP expression in cancer cells.**

Kosakowska-Cholody, T. et al. (2014) Cell Death Dis. 5:e1240.

**PubMed ID:** 24853418    **Applications:** Protein Binding Assay

**IL-17RA Is Essential for Optimal Localization of Follicular Th Cells in the Germinal Center Light Zone To Promote Autoantibody-Producing B Cells.**

Ding, Y. et al. (2013) J Immunol. 191(4):1614-24.

**PubMed ID:** 23858031    **Applications:** ELISPOT

## Reviews

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Based on validation through cited publications.



**StressMarq Biosciences**

June 15, 2016: